PMS98

DEVELOPMENT AND VALIDATION OF A DISEASE MODEL FOR POST-MENOPAUSAL OSTEOPOROSIS

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OBJECTIVES: Develop and validate an epidemiological model to estimate the burden of post-menopausal osteoporosis (PMO) in terms of prevalence (women with low bone mineral density: BMD and/or a history of fracture), fracture incidence and attributable mortality up to 2020. **METHODS:** For validation purposes, the model was developed for Sweden (where the epidemiology of osteoporosis is well documented) and provided estimates from 1990. For each year of the study period, the "incident cohort", defined as women experiencing a first osteoporotic fracture, was identified and run through a Markov model of 1-year cycles until 2020. Health states were based on the number of fractures (1, 2, 3+) and death. Fracture by site was tracked for each health state (hip, vertebral, non-hip non vertebral). Transition probabilities reflected site-specific risk of death and subsequent fractures. BMD was included as a model output and reflected difference between women with and without a history of fracture. Model inputs included census from 1970 to 2020, incidence of fracture, relative risk of subsequent fractures based on prior fracture, relative risk of death following a fracture by site, mean and standard deviation BMD by age. **RESULTS:** Model predictions averaged across age groups estimated the incidence of hip, vertebral and other osteoporotic fractures within a 5% margin of error compared to published data. Between 2010 and 2020, the number of women aged 50+ years is expected to increase by 9% whereas the number of osteoporotic fractures and women suffering from PMO (T-score < –2.5 or history of fracture) is expected to increase by 11% and 12% respectively. **CONCLUSIONS:** A PMO disease model was developed and validated against Swedish data. This model can be adapted to other countries to assess the burden of illness and used to estimate the budgetary impact of therapies that reduce bone loss.

PMS99

MANAGEMENT OF KNEE OSTEOARTHRITIS: IMPACT ON PAIN ON A DAILY BASIS

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OBJECTIVES: To observe, under actual conditions of use, the effect obtained, in the context of management of knee osteoarthritis, combining a prescription of Avian ACS (1 g/day) between 2 courses of treatment of 3 injections of hyaluronic acid spaced out by a maximum of 12 months. **METHODS:** Pragmatic, longitudinal and prospective follow-up carried out by rheumatologists in the context of their daily professional activities **RESULTS:** The results presented come from a preliminary analysis concerning the first patients assessable at 6 months. Forty-five percent of the patients are treated with hyaluronic acid for left knee osteoarthritis and 52% are treated with hyaluronic acid for right knee osteoarthritis (3% treated for both). Average pain during activities of daily living was measured by means of a visual analogue scale. It is 53.28 ± 20.83 at inclusion. At 18 weeks, this same average pain measured under the same conditions is 37.96 ± 17.17. A third measurement at 24 weeks situates it at 35.62 ± 17.95. Pain during activities of daily living is significantly reduced between inclusion and week 18 ($p = 0.0056$). The average reduction in pain during activities of daily living measured between inclusion and 6 months is also significant ($p = 0.001$). Accordingly, the reduction obtained in 6 months is 33%. **CONCLUSIONS:** Our study, which assesses the effect on pain obtained in the context of management of subjects with knee osteoarthritis, combining a prescription of Structum® (1 g/day) between two courses of treatment of three injections of Structovial®, showed a reduction in pain during activities of daily living. This reduction in pain, which is significant at 18 weeks, then perpetuated at 6 months, shows the relevance of the treatment protocol used by the doctors.

SENSORY SYSTEMS DISORDERS – Clinical Outcomes Studies

PSS1

VERTEPORFIN IN NEOVASCULAR AMD: REAL LIFE CONFIRMS CLINICAL TRIALS RESULTS

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OBJECTIVES: Verteporfin is the first product approved for neovascular age-related macular degeneration (AMD). The severity of AMD, the innovative aspect of Verteporfin and its financial implications motivated French Authorities to request a real life drug utilization study. To describe in France patients treated by Verteporfin for neovascular AMD, their visual acuity changes (responders: VA loss <15 letters) and number of needed treatments. **METHODS:** Observational, prospective, multi-center study with two parts: a registry for all patients treated by Verteporfin for AMD or other diseases; a cohort with two years follow-up of neovascular AMD patients treated by Verteporfin. **RESULTS:** In the registry, 96.8% of patients were treated by Verteporfin in its approved indication.Iin the cohort, from May 2004 to December 2006, 438 patients were included (39 ophthalmologists). Population was 78.3 ± 7.6 years, 67.6% women. At baseline, 58.2% of patients had bilateral AMD. Diagnosis was done 9.0 months ago. In the study eye, lesion type was predominately classic in 270 patients (61.6%) and occult in 168 patients (38.4%); 35.5% of patients were previously treated by Verteporfin. A total of 65.5% of population was retreated by Verteporfin during the follow-up, the first retreatment was at 4.3 months from baseline; average number of treatments was 2.21 (predominately classic: 2.50; occult: 0.80). Comparing to year 1, proportion of patients treated by Verteporfin decreased in the second year: 64.4% vs 11.5%. At two years, responder rates were 67.8% in whole naïve population, 67.2% and 68.2% for predominately classic and occult respectively. In average, visual acuity change was –7 letters (from 43 to 36 letters). No unexpected adverse event was observed. **CONCLUSIONS:** This study confirms the efficacy of Verteporfin in real life setting but treatment rate was lower than in pivotal studies.

PSS2

COMPARISON OF OUTCOMES FOR MULTIFOCAL INTRA-OCULAR LENSES (MIOLS): A META-ANALYSIS

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OBJECTIVES: To compare the clinical outcomes of different MIOLs using a meta-analysis based on the available information reported in the international literature. **METHODS:** All comparative clinical trials including at least one MIOL were extracted from the literature. Patients had to have surgery for either cataract or presbyopia. Clinical outcomes included uncorrected near and distance visual acuity (UNVA, UDVA in LogMAR), spectacle independence and halos. Random effects meta-analyses were conducted to compare outcomes for different types of implants. **RESULTS:** Twenty papers were identified with 11 monofocal IOLs and 35 MIOLs (19 diffractives including 12 ReSTORs, 14 refractives and 2 accommodatives). In comparison to monofocal IOLs, MIOLs had better UDVA (0.165 vs. 0.093, $p < 0.001$) and better UNVA (0.47 vs. 0.14, $p < 0.0001$) resulting in a higher spectacle independence incidence rate (IRR = 3.62, $P < 0.0001$). In comparison to refractive MIOLs, diffractive MIOLs had similar UDVA (0.105 vs. 0.085, $p = 0.78$), and better UNVA (0.22 vs. 0.082, $p < 0.0001$) resulting in a higher spectacle independence incidence rate (IRR = 1.75, $P < 0.001$). In comparison to other MIOLs, ReSTOR had better UDVA (0.067 vs. 0.109, $p < 0.0001$), and better UNVA (0.064 vs. 0.184, $p < 0.006$) resulting in a higher spectacle independence incidence rate (IRR = 2.04, $P < 0.004$). We found no statistically significant differences in halo incidence rates for different types of implants. **CONCLUSIONS:** MIOLs provide better UNVA and UDVA than monofocal IOLs, which lessens the need for spectacles. The design of the MIOL might play a role in post-surgical outcomes of different models. ReSTOR, a diffractive MIOL, showed better UNVA, UDVA and higher rates of spectacle independence than the other MIOLs.

PSS3

TREATMENT PERSISTENCY OF XALATAN-XALACOM, LUMIGAN-GANFORT AND TRAVATAN-DUOTRAV: AN ANALYSIS CONDUCTED ON THE UNITED-KINGDOM GENERAL PRACTITIONER RESEARCH DATABASE

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OBJECTIVES: The objective of this analysis was to compare treatment persistency of three treatment sequences: Xalatan-Xalacom (XX), Lumigan-Ganfort (LG) and Travatan-DuoTrav (TD) according to data collected in the United-Kingdom General Practitioner Research Database (UK-GPRD). **METHODS:** Patients with a diagnosis of ocular hypertension or glaucoma, or treated with a topical treatment, surgery or laser were selected. Patients with sequence prescription of XX, LG and TD were selected. A treatment failure was defined as a prescription change (adding or removing a topical treatment). Time to treatment failure was compared using Wilcoxon test applied to survival curves. Adjustment on confounding variables was performed with the propensity score method using a logistic stepwise regression. **RESULTS:** 1562 patients were treated by XX, 110 by LG and 114 by TD. Mean age was 75 years and the sex-ratio was close to 1 male/ 1 female. No demographic or co-morbidity differences between treatment sequences were observed. At 30 months, 66.5% of the XX patients had not failed (remain with the same treatment sequence), versus 60.5% of the LG and 75.1% of the TD patients (Wilcoxon, $P = 0.005$). At 60 months these results became, 42.2%, 49.9%, and 52.0%, respectively (Wilcoxon, $P = 0.04$). Adjustment for confounding variables did not change these estimates. **CONCLUSIONS:** According to the UK-GPRD information, the Travatan-DuoTrav treatment sequence was associated with longer treatment persistence

PSS4

SYSTEMATIC REVIEW OF THE EFFICACY AND SAFETY OF IMIQUIMOD 5% CREAM FOR THE TREATMENT OF ACTINIC KERATOSES

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OBJECTIVES: The aim of the review was to evaluate the efficacy and safety of imiquimod 5% cream compared with vehicle for the treatment of actinic keratoses. **METHODS:** The analysis was performed in accordance with the rules of systematic review, based on the Cochrane Collaboration (Cochrane Reviewer's Handbook) guidelines and the Health Technology Assessment Agency in Poland (AOTM) recommendations. **RESULTS:** Imiquimod 5 percent cream versus vehicle in short time